

REMARKS/ARGUMENTS

Interview

On October 27, 2003, a telephone interview was conducted between the Examiner and Masako Ando, Limited Recognition under 37 CFR §10.9(b). The Examiner is kindly thanked for granting this interview. The status of claims 22-23, 30, 34-35, and 43 in the Office Action of August 28, 2002 was discussed. The status of these claims was unclear because Paragraph 4 of the Office Action stated that claims 22-23, 30, 34-35, and 43 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, while in Paragraph 6 claims 22-44 also stood rejected under 35 U.S.C. §103. The Examiner indicated to withdraw the objections and maintain the §103 rejections. The examiner agreed to issue another Office Action clarifying the claim status, which was mailed on November 4, 2003, and to calculate the time period for reply from the mailing date of the new Office Action.

Claim Status and Amendment to the Claims [Need change for Continuation]

Claims 1-3, 7-13, 16-17, 23-33, and 35-44 are now pending.

The Examiner is thanked for his kind allowance of claims 8-9 and 16-17.

Claims 22 and 34 have been cancelled by this amendment, without prejudice.

Claims 1, 3, 7, 23, 28, 32, 35, and 44 have been amended to further particularly point out and distinctly claim subject matter regarded as the invention. The amendment also contains minor changes of a clerical nature. New claims 45-67 have been added by

this amendment and also particularly point out and distinctly claim subject matter regarded as the invention. No "new matter" has been added by the amendment.

The 35 U.S.C. §103 Rejection

Claims 1-3, 7, 10-13, 22-44 stand rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Sidhu et al. (U.S. Pat. No. 5,150,464) in view of Callon et al. (U.S. Pat. No. 5,251,205), among which claims 1, 3, 7, 28, 32, 40, and 44 are independent claims. This rejection is respectfully traversed.

According to M.P.E.P. §2143,

To establish a *prima facie* case of obviousness, three basic criteria must be met. First there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the applicant's disclosure.

Furthermore, the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. *In re Mills*, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

Claim 1 defines a method for detecting the path to a first network device. The claimed method includes (a) receiving a data packet from a second network device, the data packet containing a hop count, a destination Ethernet address corresponding to the first network device, and a source Ethernet address corresponding to the second network

device, (b) examining the hop count in the received data packet, (c) if the hop count is one, transmitting a reply data packet toward the source Ethernet address, (d) if the hop count is greater than one, decrementing the hop count by one to form a modified data packet, (e) determining at least one port on a network device receiving the data packet, by examining the destination Ethernet address, and (f) forwarding the modified data packet through the at least one port, as recited in claim 1 as amended.

The Examiner alleges, in the Office Action, that "it would have been obvious to one having ordinary skill in the art ... to have included the decrementing of the hop count of Callon et al. to the invention of Sidhu et al. in order to provide lifetime control of the packet as suggested by Callon et al." In addition, referring to claim 22, which limitations are now incorporated into claim 1 as amended, the Examiner specifically alleges as follows:

Sidhu et al. discloses a method of examining the hop count in the received data packet (inherent because it has to be done in order for an action to occur based on the hop count), transmitting a reply data packet toward the source Ethernet address if the received hop count is one (the transmission of the reply data packet toward the source Ethernet address can be done with any value that the hop count is set (see col. 13 lines 46-48)).

Applicants respectfully disagree for the following reasons.

In Sidhu, as described in column 13, lines 41-46 thereof, the hop count 952 is incremented by one each time the packet traverses a router, and when the hop count 952 reaches a specific value (\$F or 15 (decimal)), the packet is discard, i.e., no longer forwarded, since the hop count 952 represents the lifetime of the packet. In Callon, on

the other hand, the lifetime of the packet is decremented allegedly by one each hop or each hop with factor of 2 (column 49 line 65 to column 50 lines 9 thereof).

Thus, the alleged modification of Sidhu with Callon's teaching would yield the modified hop count **952** which is initially set to a specific value (a predetermined lifetime) and then decremented, rather than incremented, by one each time the packet traverses a router. When the modified hop count **952** reaches zero, i.e., the lifetime expires, the packet would be discard. If the modified hop count **952** is one, the packet is still *forwarded* toward its *destination* address, since the router must forward the packet to its destination as long as the packet is alive. In either Sidhu or Callon, a "reply" packet, if any, is generated only when the packet reaches its destination and processed by the receiver (and the receiver decides to reply). This is because a router's role is to forward the packet to the destination, and thus it must not arbitrary reply to a packet that is merely traversing the router, or send a reply packet to the *source* address of the traversing packet, as is well understood by one of ordinary skill in the art.

Accordingly, Sidhu, whether considered alone or combined with or modified by Callon, does not teach transmitting a reply data packet toward the *source* Ethernet address if the hop count is one, as recited in claim 1.

Claims 3, 7, 28, 32, 40, and 44 also include the substantially the same distinctive feature as claim 1. Therefore, it is respectfully requested that the rejection of claims

based on Sidhu and Callon be withdrawn. In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

Dependent Claims

Claims 2, 10, 23-27 depend from claim 1, claims 11-13 depend from claim 3, claims 9 and 16-17 depend from claim 8, claims 29-31 depend from claim 28, claims 33 and 35-39 depend from claim 32, and claims 41-43 depend from claim 40, and thus include the limitations of the corresponding independent claims. The argument set forth above is equally applicable here. The base claims being allowable, the dependent claims must also be allowable at least for the same reasons.

In view of the foregoing, it is respectfully asserted that the claims are now in condition for allowance.

Request for Allowance

It is believed that this Amendment places the above-identified patent application into condition for allowance. Early favorable consideration of this Amendment is earnestly solicited.

Allowable Subject Matter

The Examiner is thanked for the kind allowance of claims 8-9 and 16-17. Applicants acknowledge the Examiner's statement of reasons for allowance as set forth in the Office Action. However, Applicants point out that the reasons for allowability of the

above referenced claims are not limited to the reasons for allowance as set forth in the Office Action, and that additional reasons for allowability may exist, each of which may be independently sufficient to establish the patentability of one or more pending claims.

Applicants respectfully reserve the right to introduce, articulate, or otherwise comment on any such additional reasons for allowance as may be appropriate in any future proceedings concerning the claimed invention.

If, in the opinion of the Examiner, an interview would expedite the prosecution of this application, the Examiner is invited to call the undersigned attorney at the number indicated below.

Respectfully submitted,
THELEN REID & PRIEST, LLP

Dated: May 4, 2004


Masako Ando

Limited Recognition under 37 CFR §10.9(b)

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Expires: August 27, 2004

Harry I. Moatz

Director of Enrollment and Discipline